



Creating A Greener Energy Future For the Commonwealth

DOER Update

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Massachusetts Department
of Energy Resources

Creating A Greener Energy Future For the Commonwealth

DOER Mission

Creating a Greener Energy Future for the Commonwealth - economically and environmentally, including:

- Achieving all cost-effective energy efficiencies,
- Maximizing development of greener energy resources,
- Creating and leading implementation of energy strategies to assure reliable supplies and improve relative cost, and
- Supporting clean tech companies and spurring clean energy employment.

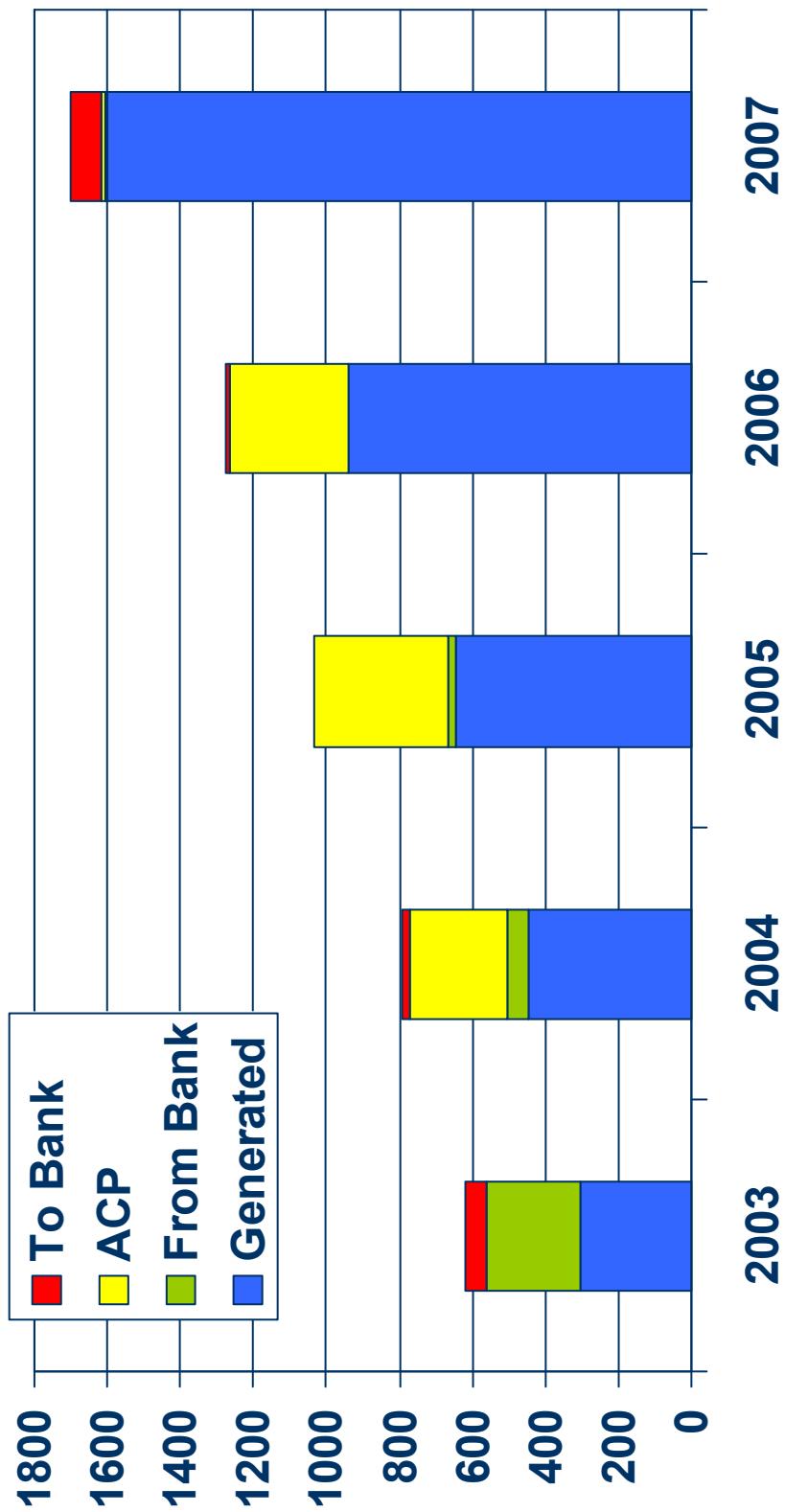
MA Initiatives

- Executive
 - LBE
 - 35% reduction by 2020
 - RGGI
 - Funding efficiency expansion
 - Renewables
 - PV: 250 MW by 2017
 - Wind: 2000 by MW 2020
 - ZNEB
 - Performance based outcomes
 - 5 homes
 - Pilot retrofit super insulation
 - CERT/Energy Leaders
 - competitions
 - MEPA
- Legislation
 - Green Jobs
 - Clean Energy Center
 - Energy Efficiency Innovation Institute
 - Ocean Management
 - Clean Energy Biofuel
 - Green Communities
 - Building Codes
 - Inspector Training
 - Least cost procurement
 - Community challenge grants
 - Renewables/net metering
 - Global Warming Solutions
 - 80% GHG reduction by 2050

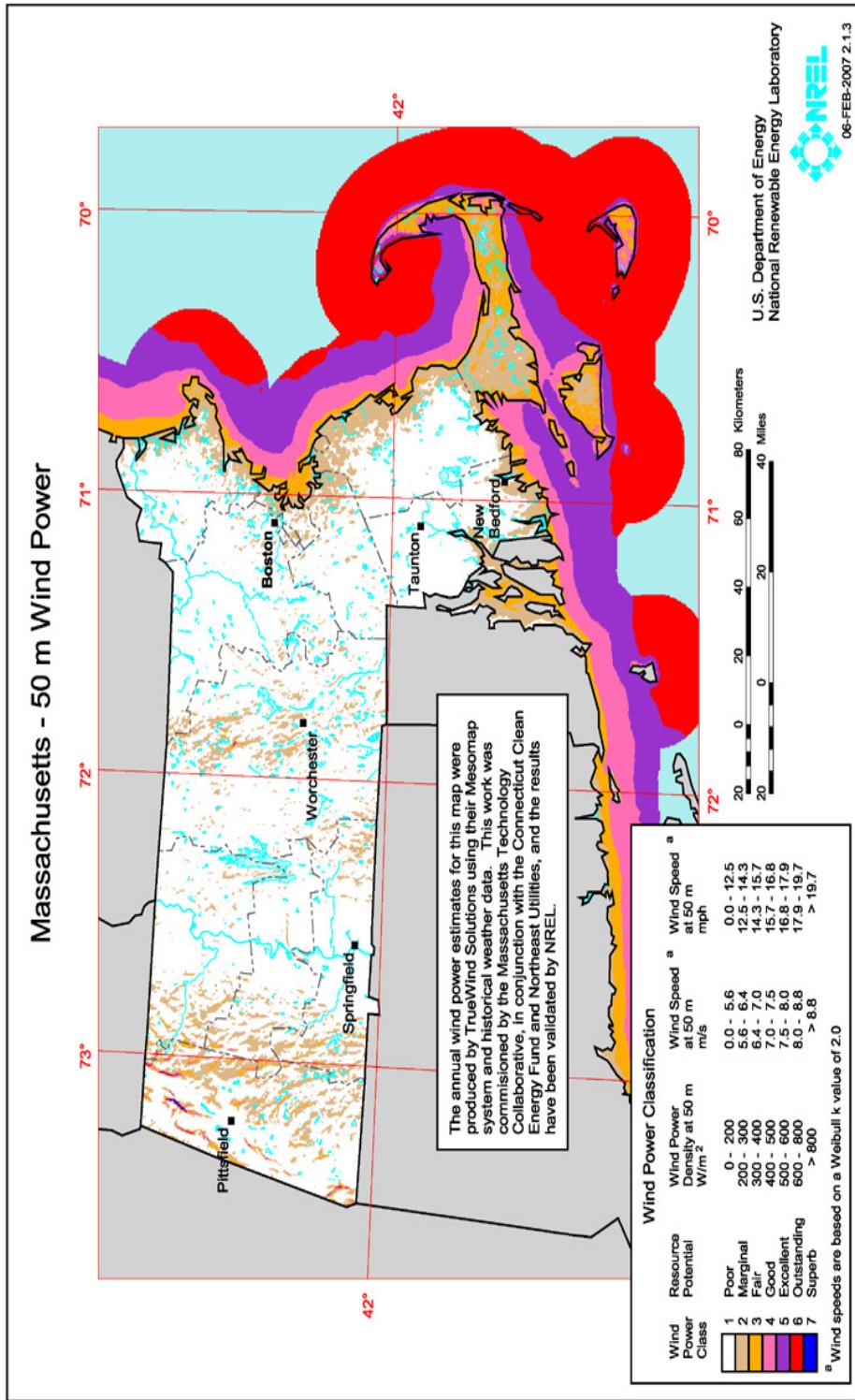


- Enable MA PV market to grow ~40% per year to achieve **250 MW by 2017**
- First installment: \$68 million over 4 years – 28MW
- Streamlined non-competitive rolling rebate
- Rebate level generally ~40% of PV system (can be 20% to 60%); up to 500 kW
- Launch on January 23, 2008
- First year accomplishments
 - \$22 million awarded; 7.2 MW; 539 projects
 - Installers and contractors tripled from 51 to 154

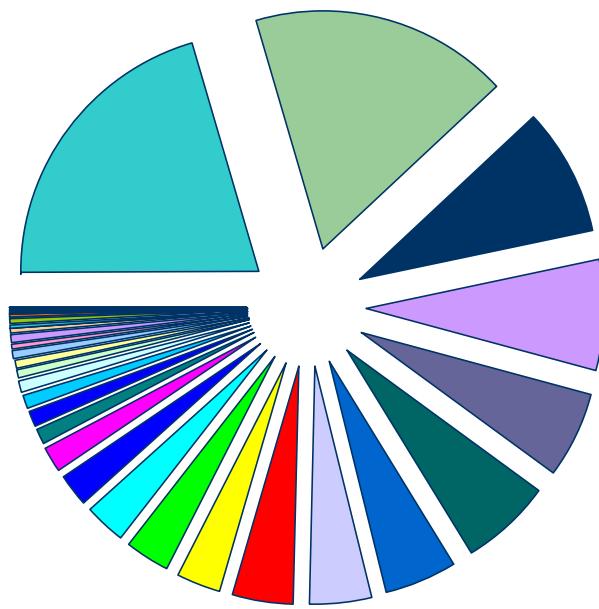
RPS meeting targets



Wind Resources



RGGI Auctions



Awarded allowance
distribution

- September 2008
 - 12.5 million allowances offered for sale
 - 6 states
 - 51,761,000 allowances requested
 - 80% bids by compliance entities
 - \$ 3.07 clearing price
 - \$ 38,575,783 proceeds
- December 2008
 - 39.5 million allowances offered for sale
 - 10 states
 - \$ 3.38 clearing price
 - \$ 106.5 million proceeds

Net Zero Energy Buildings

“Less energy usage isn’t enough, We have to set our sights not higher, but lower – all the way to zero.” Governor Patrick

Task force recommendations that would:

- issue specifications for the first state-owned Zero Net Energy building by January 1, 2010;
- specify an interim standard for state owned construction that is significantly more stringent than current
- point the way toward broad marketability of Zero Net Energy residential and commercial buildings by 2020, and universal adoption of Zero Net Energy buildings for new construction by 2030.

“With integrated planning and design, energy-efficient buildings do not have to cost more to build than the status quo,”
Deborah Rivers, Perkins+Will, a leading sustainable design firm.
In fact, green buildings save money over time.”

Opportunity: Legislation - GCA

- February 2007 Speaker's Bill
- Summer 2007 Coalitions Work
- November 2007 House 100% in favor
- January 2008 Senate 100% in favor
- Spring 2008 Conference Committee
- June 2008 House and Senate 100% in favor
- July 2008 Green Communities Act Signed

Overview of Green Communities Act

- 1) Creates unconstrained market for energy efficiency to compete with supply – utilities to invest in all cost-effective energy efficiency
- 2) Partners state with towns/municipalities to implement energy efficiency and renewables
- 3) Expands renewable energy goals through increase in RPS minimum standard and additional RPS classes
- 4) Enhances market opportunities for renewables through municipal ownership, net metering, and utility PV ownership

And much more including RGGI authorization, MRET changes, State facilities, Ratepayer Advocacy in AGs office, DPU steam system oversight, support hybrids, form economic target areas

Efficiency

- Procure all demand resources that are less expensive than supply funded by SBC, FCM, RGGI, NOx, other
- Forming Energy Efficiency Advisory Counsel
 - 11 members; specified composition
 - 5 year term
- Clear timetable for 3 year plans
 - Submit to Counsel by April 30 and to DPU by Oct 31
 - 90 days for DPU decision
- Adopts IECC for building codes w/ automatic updating w/
 - inspector training and certification
 - Performance commissioning for commercial new buildings
 - Home energy audit information provided to buyers

Green Communities

- Provide technical and financial assistance to communities for efficiency and renewables
- Criteria for a Green Community
 - Provide as-of-right siting for renewables
 - Expedited permitting
 - Reduce energy consumption by 20% w/ in 5 years from established baseline
 - Purchase only fuel efficient suitable vehicles
 - All construction achieves minimum lifecycle cost via efficiency, water conservation and renewables
- Funded up to \$10 million/yr from RGGI and NO_x, SBC, ACP and MRET
- Muni Light Plant opt-in provision to MRET

Renewables

- Extends and accelerates RPS Class I
 - 1% increase per year after 2009
 - 15% by 2020
- Determine feasibility of import standards including committing resources to capacity market by 11/1/08
- Create new RPS Class II (operating before 12/31/97) and Alternative Energy Portfolio Standard (CCS required, CHP, flywheel, paper derived fuel) – targets to be set by 1/1/09
- Long-term contract pilot (10 to 15 years); capped at 3% of utility load
- Creates utility owned PV opportunity 25 MW by 2009, 50 MW by 2010
- DOER to establish minimum percentage “set-aside” for on-site renewable energy generation (2 MW units and smaller)

Status

- Create regulatory proceeding and filing calendars
 - 11/1/08 Imports **Done**
 - 1/1/09 RPS II and AEPS **Done**
 - 4/1/09 first 3yr efficiency plan to Counsel and “pay and save” pilot, smart grid pilot **Underway**
 - 7/1/09 C&D
 - 10/31/09 first 3yr efficiency plan to DPU
 - 12/31/09 Green Building and energy efficiency cost effectiveness
 - 1/2/10 Siting and Hybrid and alt fuel vehicle plan
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Green Jobs Act

- Promotes jobs in the clean energy sector through grants and loans, workforce development, clean energy research, and assistance to higher education
- Creates the Massachusetts Clean Energy Technology Center within the Executive Office of Environmental Affairs and a 15-member advisory committee, appointed by the governor
- Initial allocation, \$68 million over the next five years for industry assistance including workforce development grants and seed funding.

Global Warming Solutions Act

- Requires GHG Emissions reduction of 10 to 25% by 2020
- 80% reduction in greenhouse gases from 1990 levels by 2050
- Interim emissions limits for 2030 and 2040
- Establishes a regional greenhouse gas registry and reporting system for emissions sources
- Requires ongoing records of all greenhouse gas emissions
- Requires addressing adaptation
- EOEEA Secretary to convene an advisory committee and file a report of recommendations no later than December 31, 2009

Outcomes

A new greener world order:

- Much more energy efficient economy
 - Businesses, Institutions, Communities, Homes
 - No longer optimizing a fixed efficiency spend
 - Now spending whatever makes economic sense
- Significantly increased renewables
 - Building off success
 - Adding important elements
- Strong economic growth